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(File No.) 021992-0010

June 25, 1999

Chairman William Kennard  
Commissioner Susan Ness  
Commissioner Harold Furchtgott-Roth  
Commissioner Michael Powell  
Commissioner Gloria Tristani  
Federal Communications Commission  
The Portals  
445 12<sup>th</sup> Street, N.W.; 8<sup>th</sup> Floor  
Washington, D.C. 20554

RECEIVED

JUN 25 1999

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Re: *Diversified Communications Engineering, Inc.;*  
*File No. 0094-EX-ST-1999, Call Sign WA2XMY; ET Docket No. 98-26.*

Dear Chairman Kennard and Commissioners:

For nearly two decades, the Commission has adopted policies intended to foster the success of the DBS industry, with the goal of promoting DBS as a competitor to incumbent cable television operators. That goal finally is being realized in the multichannel video marketplace, with DBS providers today serving more than nine million households.

DIRECTV is concerned, however, that you may not be fully aware of an extremely serious threat to the continued development of DBS that is now being considered in various Commission proceedings. Specifically, Northpoint Technology and its affiliates, BroadwaveUSA, numerous entities using the trade name "Broadwave," and a consulting firm called Diversified Communication Engineering, Inc. ("Diversified"), have been engaged in an effort to introduce a terrestrial point-to-multipoint microwave service on a secondary basis into the 12 GHz band – the spectrum that is used by DBS operators on a primary basis to downlink programming to millions of subscribers. DIRECTV has provided detailed engineering analysis

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to show that this technology cannot co-exist with DBS service at 12 GHz, and that it poses a dire threat of interference to the receipt of DBS programming by DBS subscribers. The irony is that the Commission earlier had cleared the 12 GHz band of terrestrial sources of interference.

DIRECTV strongly believes that if the Northpoint technology is introduced into the frequency band that is "mission critical" to provide DBS service to millions of consumers nationwide, it will undercut the very benefits of cable competition that the Commission has spent decades attempting to promote, and more specifically, will cause millions of DBS subscribers' service to suffer -- a senseless anticonsumer result. DIRECTV's specific concern here is that, without adequately examining the Northpoint interference threat, the Commission may be inadvertently taking actions that are antithetical to its pro-competitive DBS policy.

One such action is addressed in the attached filing. On May 26, 1999, the Commission's Office of Engineering and Technology granted the above-referenced Special Temporary Authorization ("STA") to Diversified to operate experimental stations using its Northpoint technology in Washington, D.C. Diversified applied for this STA with the stated purpose of conducting lobbying demonstrations for Members of Congress and Congressional staff.

DIRECTV requests immediate review of the grant of Diversified's requested STA. The Commission should cancel it. Diversified already has an existing experimental license to test the Northpoint technology,<sup>1</sup> and it is difficult to comprehend why the Commission would placate Diversified's desire for unnecessary "show and tell" demonstrations inside the Beltway when there is a countervailing severe interference threat to tens of thousands of D.C.-area DBS subscribers. To the extent that the testing contemplated by the Diversified STA is permitted to proceed in Washington, DIRECTV requests, at a minimum, that testing be immediately suspended until such time as the STA is conditioned in a fashion that will, first and foremost, ensure non-interference with DIRECTV's DBS service, and second, produce meaningful, scientifically sound data regarding the interference of the Northpoint technology with DBS operations. The attached filing proposes such conditions.

The Commission's grant of the current unnecessary STA, which, by its terms was requested purely for political purposes, suggests that the Commission does not yet appreciate the seriousness of the threat that the Northpoint technology poses to DBS operations. DIRECTV will continue to dedicate the resources necessary to disabuse the Commission and Congress of the notion that interference generated by the Northpoint system is "no big deal." It is a big deal -- and indeed, is an interference source that DIRECTV views with equal if not more alarm, for example, than the interference that will be generated by NGSO satellite systems, particularly because the interference effects of introducing Northpoint technology at 12 GHz will be cumulative with NGSO operations.

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<sup>1</sup> Diversified has been testing the Northpoint technology of two sites in Austin, Texas and King Ranch (Kleberg) Texas under an experimental license granted by the Commission last year.

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Furthermore, DIRECTV would reiterate that Diversified bears burdens of proof and persuasion with respect to the Northpoint technology that, to date, it has failed miserably to carry. DIRECTV mentions this because it appears that the Commission is moving in a direction that has this point exactly backwards. The DBS industry, after billions of dollars' worth of investment, has delivered on its promise of developing a formidable competitor to incumbent cable television operations. Diversified and its affiliates, by contrast,

- propose a terrestrial point-to-multipoint technology that has never been shown to come close to co-existing with DBS service even on a secondary basis;
- propose a technology that adds no new capability or value to DBS services already offered at 12 GHz; and
- propose a technology that is easily accommodated in frequencies that have been expressly set aside for Northpoint-like terrestrial services, *e.g.*, LMDS or MDS.

As a policy matter, to effectively shift the burden to the DBS industry to prove why such a technology should *not* be permitted to wreak havoc at 12 GHz is inappropriate.

The interference that DIRECTV has documented using Northpoint's own test results will on occasion result in a DBS subscriber's total loss of picture at locations close to Northpoint transmitters. Farther away from the transmitters, it will result in longer and more frequent rain outages of DBS service. These types of harmful interference are precisely of the type that DIRECTV has worked arduously for more than two years to address in the NGSO context. If tolerated – even facilitated – by the Commission here, it will harm the DBS industry's reliance on quality of service as a differentiating factor in the MVPD marketplace. Over time, such interference could seriously harm the DBS industry's budding success. Indeed, for this reason, the Commission has established and followed for two decades the wise policy of allowing DBS to develop in an environment where terrestrial interference sources were cleared *out* of the 12 GHz band. The Commission must understand that re-introducing significant terrestrial interference sources into the 12 GHz band could be the bad policy judgment that truly snatches defeat from the jaws of victory in terms of fostering viable cable competition.

While Diversified and its affiliates have made enormous progress in terms of political positioning to advance the Northpoint service proposal, the bottom line is that artful lobbying is not a substitute for sound engineering. The Commission should not suggest otherwise, including in actions taken with respect to seemingly innocuous experimental authorizations or STAs.

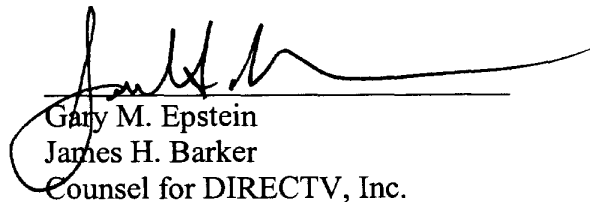
DIRECTV thus respectfully requests that the Diversified STA be cancelled, or in the alternative, that the changes proposed by DIRECTV in the attached filing be effected

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immediately, with any testing suspended until all conditions proposed are in place. As the nation's most promising multichannel video programming distributor competitor to entrenched cable operators, DIRECTV's service to subscribers should not be jeopardized by secondary experimental operations in the downlink band that is critical to DIRECTV's operations.

Very truly yours,



Gary M. Epstein  
James H. Barker  
Counsel for DIRECTV, Inc.

cc: Members of the House and Senate Commerce Committees  
Kimberly Baum, IB  
James Burtles, OET  
Antoinette Cook Bush, Esq.  
Tom Derenge, OET  
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Ronald Repasi, IB  
Tom Tycz, Chief, Satellite and Radio Communications Div., IB  
Douglas Young, OET

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Diversified Communication Engineering, Inc.	)	File No. 0094-EX-ST-1999
Experimental Special Temporary Authorization	)	Call Sign WA2XMY
	)	

**APPLICATION OF DIRECTV, INC.  
FOR EXPEDITED REVIEW AND REQUEST  
FOR IMMEDIATE SUSPENSION OF TESTING**

On May 26, 1999, the Commission's Office of Engineering and Technology granted the above-referenced Special Temporary Authorization ("STA") to Diversified Communication Engineering, Inc. ("Diversified") to operate experimental stations using its Northpoint technology in the Washington, D.C. area on a temporary basis. Diversified applied for this STA with the stated purpose of conducting lobbying demonstrations for Members of Congress.<sup>1</sup> By this Application, DIRECTV, Inc. ("DIRECTV")<sup>2</sup> requests immediate review of the grant of Diversified's requested STA. DIRECTV requests that the STA be cancelled. In the alternative, DIRECTV requests immediate suspension of tests authorized under Diversified's STA unless and until the STA is amended to address DIRECTV's concerns.

DIRECTV continues to question the policy justification for permitting additional sites to test a technology that poses a tremendous interference threat to DBS -- a growing, mass-market, consumer service that is only beginning to offer competition to incumbent cable television

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<sup>1</sup> Diversified STA Request at 2.

<sup>2</sup> DIRECTV is a wholly-owned subsidiary of DIRECTV Enterprises, Inc., a licensee in the DBS service and wholly-owned subsidiary of Hughes Electronics Corporation.

operators. Diversified already has existing experimental licenses to test the Northpoint technology, and it is difficult to comprehend why the Commission would placate Diversified's desire for unnecessary "show and tell" demonstrations inside the Beltway when there is a countervailing severe interference threat to tens of thousands of D.C.-area DBS subscribers. To the extent that the testing contemplated by the Diversified STA is permitted to proceed in Washington, DIRECTV requests, at a minimum, that testing be immediately suspended until such time as the STA is conditioned in a fashion that will, first and foremost, ensure non-interference with DIRECTV's DBS service, and second, produce meaningful, scientifically sound data regarding the interference of the Northpoint technology with DBS operations.

## **I. BACKGROUND**

The frequencies that Diversified seeks to utilize in its proposed testing of Northpoint technology presently are the core frequencies used by DIRECTV and other DBS providers to downlink DBS programming to tens of thousands of subscribers residing in the Washington, D.C. area. These frequencies are allocated for such use by DBS providers on a primary basis.

By letter dated March 26, 1999,<sup>3</sup> DIRECTV opposed the grant of an STA to Diversified for purposes of testing the Northpoint technology in the Washington, D.C. area. DIRECTV expressed concern that Diversified had not demonstrated (and still has not demonstrated) that its operations will not cause harmful interference with primary operations of DBS as the "established radio service"<sup>4</sup> at 12 GHz. DIRECTV pointed out that the Northpoint technology Diversified proposes to operate is the subject of a pending rulemaking proceeding, ET Docket

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<sup>3</sup> Letter to Dale N. Hatfield, Chief, Office of Engineering & Technology, FCC from Gary M. Epstein and James H. Barker, Counsel for DIRECTV, Inc. (March 26, 1999).

No. 98-206, in which DIRECTV has demonstrated that the Northpoint technology will in fact cause harmful interference to DBS operations in the 12.2-12.7 GHz band -- the primary band allocated by the Commission for DBS downlinks.<sup>5</sup> DIRECTV also questioned the "need" for the requested STA to operate the proposed stations in the time frame, manner or area requested.<sup>6</sup> DIRECTV noted that if additional technical data is needed, Northpoint is free to gather it under its existing experimental authorizations.

On May 26, 1999, the Commission granted Diversified's requested STA. The grant was accompanied by a letter from OET staff to DIRECTV and Echostar counsel, dated the same day, suggesting that the proposed testing should move forward because "[n]either DIRECTV nor Echostar has persuasively shown that [Diversified's] proposed operations carry a substantial risk of causing harmful interference."<sup>7</sup> On June 22, 1999, DIRECTV representatives met with OET staff, including OET Chief Dale Hatfield, to discuss further DIRECTV's concerns with the proposed testing of Northpoint technology in Washington, D.C.<sup>8</sup>

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<sup>4</sup> See 47 C.F.R. § 5.11(a)(2).

<sup>5</sup> In connection with Diversified's previous testing of the Northpoint system, DIRECTV and other DBS licensees objected strongly to the grant of an experimental license to test Northpoint's technology in an urban environment. DIRECTV still has pending a petition for reconsideration of DCE's experimental license to conduct tests in Austin, Texas on behalf of Northpoint under station number WA2XMY. See Experimental License of Diversified Communication Engineering, Inc., File No. 6001-EX-MR-1998, Call Sign WA2XMY, Petition for Reconsideration of DIRECTV, Inc. (Aug. 19, 1998); Reply of DIRECTV, Inc. (Sept. 8, 1998).

<sup>6</sup> See 47 C.F.R. § 5.56 (a).

<sup>7</sup> Letter from James R. Burtle, Chief, Experimental Licensing Branch, OET, to Gary M. Epstein, et al. (May 26, 1999) ("Burtle Letter"), at 2.

<sup>8</sup> See DIRECTV Ex Parte (June 23, 1999) (and attached presentation).

**II. DIVERSIFIED'S STA SHOULD BE CANCELLED, OR IN THE ALTERNATIVE, TESTING UNDER DIVERSIFIED'S STA SHOULD BE IMMEDIATELY SUSPENDED UNTIL ADDITIONAL CONDITIONS ARE IMPOSED THAT ENSURE NON-INTERFERENCE WITH THE DBS SERVICE AND FACILITATE THE COLLECTION OF MEANINGFUL, SCIENTIFICALLY SOUND DATA**

Diversified has been granted its STA subject to the cancellation provisions of Section 5.83 of the Commission's experimental licensing rules, which state that Diversified's authority to use the assigned frequencies "is subject to change or cancellation by the Commission at any time without hearing if in [the Commission's] discretion the need for such action arises."<sup>9</sup> The Commission should exercise its authority to suspend testing under the existing STA, and to modify the STA's terms if testing is to proceed.

At the outset, DIRECTV continues to believe that the Washington, D.C. tests proposed by Diversified, designed solely to add political momentum to its grossly unsupported engineering claims, are unnecessary in view of Diversified's existing experimental authorizations, and needlessly put DBS subscribers at risk. At a minimum, however, there is an urgent need for change to the conditions of Diversified's STA grant before any tests should be permitted to proceed.

First, and most important, the tests must be conducted in a manner that minimizes the potential for interference with service to DBS subscribers. Second, if the tests are going to be used, as Diversified claims, for lobbying purposes to demonstrate the alleged ability of Northpoint technology to co-exist on a non-interfering basis with DBS operations at 12 GHz, then the tests should be set up and conducted in a scientifically sound manner that reflects as closely as possible "real-world" operating conditions and parameters. If DBS subscribers are



going to be subjected to additional interference risk, then the tests should be worth something, and should produce meaningful data that can be analyzed to determine the level of Northpoint interference into DBS operations.

**A. The Proposed Washington, D.C. Tests Are Unnecessary And Needlessly Put DBS Subscribers At Risk**

Section 5.61 of the Commission's rules states that STA applicants should demonstrate a "need" for the STA coupled with "compelling reasons why" such an STA should be granted expeditiously.<sup>10</sup> DIRECTV continues to question how Diversified has met this standard when, by its own admission, its proposed tests are merely intended to serve as "show and tell" for D.C.-area policymakers. DIRECTV wishes to reiterate that, while it has no interest in preventing DCE from making its case for the Northpoint technology to decisionmakers in Washington, D.C., DIRECTV vigorously objects to DCE doing so at the expense of tens of thousands of Washington, D.C.-area DBS subscribers who are highly likely to experience some form of harmful interference from DCE's testing. Thus, DIRECTV continues to question the rationale for permitting Diversified to add test locations in the Washington, D.C. area.

DIRECTV notes that Diversified has an existing, active experimental license covering two locations -- Austin, Texas and King Ranch (Kleberg), Texas. DIRECTV has a pending reconsideration petition regarding the Austin tests that was never acted upon by OET,<sup>11</sup> despite having been filed more than ten months ago, and DIRECTV's filings have already documented

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<sup>9</sup> 47 C.F.R. § 5.83.

<sup>10</sup> 47 C.F.R. § 5.61(a)

<sup>11</sup> See Experimental License of Diversified Communication Engineering, Inc., File No. 6001-EX-MR-1998, Call Sign WA2XMY, Petition for Reconsideration of DIRECTV, Inc. (Aug. 19, 1998); Reply of DIRECTV, Inc. (Sept. 8, 1998).

harmful interference to DBS service resulting from those tests.<sup>12</sup> DIRECTV has never objected to Diversified's experimental license at the King Ranch location, because there is little risk of interference to DIRECTV subscribers at that isolated location.

Because Diversified has avenues available to it to continue testing Northpoint technology (including the King Ranch site where the interference risk to current DBS subscribers is low), and especially in view of Diversified's abject failure to accommodate DIRECTV's reasonable objections to the insufficient conditioning of the Austin tests, DIRECTV does not believe that Diversified has demonstrated the requisite "need" for an STA under Commission rules. Under the circumstances, the desire to provide demonstrations to Congressional staff is not and should not be worth the interference risk engendered. DIRECTV believes that the Commission has followed an ill-considered course in expanding to yet another urban geographic area a potent source of terrestrial interference to DBS operations. DIRECTV therefore urges the Commission to reconsider this action, and to cancel the Diversified STA.

**B. If The Washington, D.C. Tests Are Permitted To Proceed, Conditions Must Be Imposed To Ensure Non-Interference With DBS Service**

If the STA is not cancelled outright, DIRECTV's serious concerns about the impact of the Diversified tests on DIRECTV subscribers' service must be addressed in the special conditions attached to the Diversified STA. DIRECTV emphatically disagrees with the assertion by OET that the DBS industry to date has not "persuasively shown that [Diversified's] proposed operations carry a substantial risk of causing harmful interference."<sup>13</sup> In fact, DIRECTV showed,

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<sup>12</sup> DIRECTV provided extensive analysis of the Texas test data in its filings in ET Docket No. 98-206, and once again incorporates those filings herein by reference.

<sup>13</sup> Burtle Letter at 2.

using Diversified's own questionable data, that DBS subscribers experienced unacceptable, harmful interference to their DBS service that emanated from *every single test* site save one.<sup>14</sup>

If the Diversified "show and tell" testing is to proceed here, DIRECTV's DBS subscribers in Washington, D.C. must be protected. DIRECTV requests that the current STA grant to Diversified be revisited, and that, in addition to the conditions contained in the current authorization, the following conditions be imposed to minimize harmful interference with Washington area consumers' receipt of DBS service. DIRECTV notes that these conditions include a mix of both technical requirements and notice/customer care provisions designed to (i) minimize actual interference from the Northpoint tests; (ii) ensure that consumers are aware of the potential interference source; and (iii) facilitate a rapid, consumer-friendly response in the event that interference occurs.

#### **1. Transmit EIRP**

The Commission should mandate a maximum EIRP of 12.5 dBm for Northpoint test transmissions – a value that is consistent with previous filings by Diversified, including the recent engineering report filed by Diversified in April, 1999.<sup>15</sup> This power limit should be incorporated expressly into the terms of Diversified's STA.

DIRECTV notes, however, that even at this reduced power level, the Northpoint technology will not even approach an acceptable level of interference relative to DBS systems. DIRECTV has spent the past two years working actively within the domestic and international

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<sup>14</sup> See, e.g., Reply Comments of DIRECTV, Inc., ET Docket No. 98-206 (April 14, 1999), at 27-29.

<sup>15</sup> See Delawder Communications, Inc., *Engineering Supplement in Support of Request for STA to Test the Northpoint Technology System in the Washington, D.C. Area* (April 5, 1999) ("April DCE Report").

regulatory communities to develop criteria for sharing the DBS downlink spectrum with non-geostationary orbit space station ("NGSO") systems. This process has included the development of sophisticated statistical models for use in the evaluation of interference. The technical work has been done under the auspices of the FCC and the International Telecommunications Union ("ITU") in an open, public fashion where technical issues have been raised and are being resolved on all sides.

As DIRECTV has explained in its filings in ET Docket No. 98-206, the inter-service sharing criteria being developed as international and domestic BSS sharing benchmarks are directly applicable to the proposed Northpoint sharing situation.<sup>16</sup> Applying these criteria, a C/I ratio greater than 21.6 dB is required to keep unavailability degradation below 10%.<sup>17</sup> This is the maximum level of degradation allowed from all NGSO FSS systems combined. Using Diversified's own calculations and analysis in the April DCE Report, the red contours on the interference level plots in the report represent a C/I ratio of 20 dB.<sup>18</sup> Thus, any subscriber within or near the -113.dBmW (red) contours shown in the April DCE Report will receive interference at higher levels than will be allowed from *all NGSO FSS systems taken together*, and substantially higher than allowed *from any one NGSO system*. That is one reason why DIRECTV believes it highly unlikely that the Northpoint technology can ever co-exist with the DBS service at 12 GHz.

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<sup>16</sup> See Reply Comments of DIRECTV, Inc., ET Docket No. 98-206 (April 14, 1999), at 6-21; Comments of DIRECTV, Inc. at 24-25 & Technical Appendix B, at 2-18.

<sup>17</sup> See Reply Comments of DIRECTV, ET Docket No. 98-206 (April 14, 1999), at 14.

<sup>18</sup> See April DCE Report at attachments (charts).

## **2. Zone of Affected Subscribers**

There are tens of thousands of DBS subscribers located within the Washington D.C. area that will be affected by interference generated at the proposed Diversified test sites. It is critical that these subscribers be protected at all times, without requiring any subscriber action or access to subscriber property to mitigate interference -- Diversified's experimental operations simply cannot be permitted to cause degradation or disruption of these customers' DBS service.

DIRECTV therefore requests that the Diversified STA be amended to specify that, without regard to actual signal coverage or interference levels, all subscribers residing within a 10-mile radius of each field test site have DBS signal reception protected at all times. This area would be the minimum used for purposes of the published notice procedures specified in the STA conditions (see below).

## **3. Notice to Subscribers**

The current Diversified STA requires that, beginning two weeks prior to any test period, Diversified must publish a notice in the newspaper circulated in the area of the test, which generally describes the test, the test dates and times of testing, the potential for interference to be caused to DBS subscribers, and provides a phone number for DBS subscribers to call in cases of interference.<sup>19</sup> In addition, copies of the newspaper notice are to be sent to all DBS licensees via certified mail to arrive not less than five (5) days prior to the commencement of testing.<sup>20</sup> While DIRECTV generally supports the concept of notifying subscribers of the testing, DIRECTV believes that the condition should be clarified in several respects.

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<sup>19</sup> Diversified STA, Condition No. (4).

<sup>20</sup> *Id.*, Condition No. (6).

First, DIRECTV requests that DBS providers be accorded meaningful input and, if necessary, editorial privileges with respect to such notices prior to their publication. Such a requirement is necessary to ensure that the notices are clear and user-friendly with respect to the information imparted to potentially affected subscribers. DIRECTV is in a far better position than Diversified to know how best to communicate with its subscribers.

Second, the STA should specify that the notice be prominently displayed and be easily visible to DBS subscribers. The effectiveness of the notice provision would be obviated if, for example, Diversified publishes the notice in a small advertisement buried in the Classifieds section of a low-circulation newspaper.<sup>21</sup> The STA also should specify that the notice run daily during the two-week period preceding a test.

Third, it is vital that DBS service providers continue to function as the interface with any of their subscribers affected by Diversified's testing in order to ensure continuity and quality of customer service. The STA therefore should be clarified to specify that the phone number provided for subscribers to call should they experience service interruptions be one provided by the *DBS service provider*, not Diversified. DIRECTV's subscribers should not be required to deal with a company with whom they have no relationship.

Fourth, and correspondingly, the STA should be amended to clarify that Diversified will bear the cost of all notices and any special customer service lines set up by a DBS provider that

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<sup>21</sup> In the Austin tests, for example, Diversified's notice to DBS subscribers of its testing appeared in a very small classified advertisement in a single newspaper for *only one day*, approximately two weeks before the December test. A copy of Diversified's Affidavit of Publication, including the advertisement, was included with DIRECTV's initial comments in ET Docket No. 98-206 as Attachment C. It is highly unlikely that this notice was sufficient to give DBS subscribers who may have experienced visible

are necessitated by the proposed testing. DBS providers, as primary users of the 12 GHz band, should not be forced to bear the cost of mitigating any interfering experimental operations of Diversified.

Finally, five days is an unreasonably short notice period for DBS licensees. The license should be amended to require that Diversified give DBS licensees no fewer than 21 days notice prior to each test period. This is essential in order to provide sufficient time for DBS licensees to make the arrangements necessary to monitor the tests and to travel to the Washington, D.C. test sites.

#### **4. Suspension and/or Cessation of Testing**

The Diversified STA requires that if a DBS subscriber complains of interference because of Diversified's testing, the testing shall be immediately suspended until the complaint can be investigated and resolved. The Commission and applicable licensees are to be immediately informed of the complaint, and if the complaint cannot be satisfactorily resolved, testing shall not continue.<sup>22</sup>

DIRECTV supports this condition, but again believes that the STA should contain more specificity with respect to the procedures for handling complaints of DBS service disruption. The STA should require a separate, direct "hotline" to be set up between DBS providers in the affected area and Diversified that will be manned by Diversified during all testing periods at Diversified's expense. Diversified should be required to staff all test sites with FCC-licensed

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interference adequate knowledge of Diversified's hotline in order to voice their complaints.

<sup>22</sup> Diversified STA, Condition No. (5).

personnel with sufficient authority to immediately suspend testing if notice of a complaint is communicated by a DBS provider.

## **5. Access to Diversified Test Sites**

Finally, DIRECTV requests that the STA be amended to provide each affected DBS licensee with reasonable access to Diversified transmit and receive test sites at any time the transmission is active, and prior to the tests, for purposes of witnessing testing, verifying the test set-up, and ensuring conformance by Diversified with the conditions of the experimental license. Without such access, it will be impossible for DBS licensees to verify Diversified's testing methodology.

### **C. Testing Of Northpoint Technology In Washington, D.C. Should Be Crafted To Provide Meaningful, Scientifically Sound Data**

Even if the above-described conditions are added to the Diversified STA, the fact that measures can be taken to minimize the service degradation or disruption risk to DBS subscribers still does not warrant incurring that risk if the testing proposed by Diversified in Washington, D.C. does not attempt to replicate in a scientifically sound manner "real-world" operating conditions. Diversified makes no pretense regarding the purpose of these tests: they are intended to convince the Commission and Congress that the Northpoint technology can co-exist with DBS operations at 12 GHz. Given this express purpose, Diversified should be required to proffer a test plan that will approximate how the alleged co-existence of primary DBS operations and secondary Northpoint operations would occur in a real world service environment – *i.e.*, the tests should approximate how the Northpoint system will actually be deployed, and should account for how DBS service is actually provided on a mass-market basis in the marketplace today.



In particular, DBS is a consumer-friendly service that uses receiving equipment that is easily installed by subscribers. "Cooked" tests that do not account for this fundamental feature of DBS service will amount to nothing more than meaningless publicity stunts. Thus, the Commission should require Diversified to present an acceptable test plan – with which Diversified will agree to comply as a condition of and which is attached to the STA – which contains the following requirements.

**1. No Alteration Of Equipment**

As mentioned, one of the key service features of DBS is its consumer-friendly nature. It is essential that this element of DBS service be maintained, as any impediments to installation and use of DBS receiving equipment will seriously harm DBS providers' ability to compete with incumbent cable operators. DBS receiving equipment is not intended to be altered on a case-by-case basis, and it should not be altered as part of any Diversified tests. As a part of its test plan, Diversified should be prohibited from modifying or altering existing DBS hardware installations in order to mitigate Northpoint technology interference.

**2. Multiple Cell Sites**

DIRECTV has reason to believe that overlapping Northpoint transmissions from multiple cell sites will exacerbate the already-unacceptable levels of interference into DBS receivers generated by the Northpoint technology. Thus, Diversified should be required to demonstrate the Northpoint system configuration using multiple cell sites if that is Diversified's intended operating configuration. The cell sites should be configured in a cascade or repeater system if this is the intended operating configuration. Permitting Diversified to test using single cell sites will produce worthless data if Diversified has no intention of actually using single cell sites.

### **3. Test Bandwidth**

The Northpoint signals generated during testing also must emulate an operational system as closely as possible in terms of bandwidth utilized. The test bandwidth thus should cover at least 24 MHz of bandwidth to demonstrate compatibility with existing DBS licensees.

### **4. Realistic Operating Configuration**

Once again, to have a meaningful sense of how the Northpoint system would affect the DBS service, the test plan should specify realistic antenna patterns, antenna height and power levels for the demonstrations. That is, these test parameters should be designed for Northpoint's intended operating configuration, and not artificially designed to minimize interference for purposes of this lobbying test.

### **5. Dynamic Power Control**

If dynamic power control will be a feature of the Northpoint system to address rain fade or other problems, Diversified should be required to incorporate it into its testing.

### **6. Verification**

Finally, the test plan should contain measures that will facilitate verification of test results. Diversified should be required to continuously record on a strip chart recorder the Northpoint system's transmit power during each actual programming day (*i.e.*, 24 hours/day) for the duration of the testing. In addition, Diversified should be required to notify DIRECTV and other DBS providers of all scheduled downtime 48 hours in advance, and to provide all anticipated and actual transmitted power levels to DIRECTV on a daily basis during testing at each transmitter site.

**D. The Burden Is On Diversified, Not The DBS Industry, To Prove That Northpoint System Operations At 12 GHz Will Not Interfere With DBS Operations**

Finally, although the issue is being addressed in the context of ongoing rulemaking and waiver proceedings, DIRECTV wishes to reiterate again its strong opposition to the introduction of Northpoint technology into the 12 GHz band, especially given what is known about the technology to date. The Commission and the DBS industry have labored for nearly two decades to position the DBS service for success as a competitive alternative to cable. Now that that prospect is finally being realized, it is extremely disturbing that the Commission would even entertain the idea of introducing a potentially disastrous, cumulative interference source into the band that is mission critical for subscribers' receipt of DBS service.

The Commission's grant of the current unnecessary STA, which, by its terms was requested purely for political purposes, suggests that the Commission does not yet appreciate the seriousness of the threat that the Northpoint technology poses to DBS operations. DIRECTV will continue to dedicate the resources necessary to disabuse the Commission and Congress of the notion that interference generated by the Northpoint system is "no big deal." It is a big deal – and indeed, is an interference source that DIRECTV views with equal if not more alarm, for example, than the interference that will be generated by NGSO satellite systems, particularly because the interference effects of introducing Northpoint technology at 12 GHz will be cumulative with NGSO operations.

But it also should be reiterated that Diversified bears burdens of proof and persuasion that, to date, it has failed miserably to carry. As an STA holder, Diversified must not cause

harmful interference into the DBS service.<sup>23</sup> As a proposed secondary user at 12 GHz, Diversified must (i) “not cause harmful interference” to DBS, the primary service and (ii) “cannot claim protection from harmful interference from” DBS stations.<sup>24</sup> Indeed, as an entity in search of a service, Diversified must make its case generally as to why it should be permitted to invade the 12 GHz band in the manner proposed, as opposed to other spectrum expressly set aside for Northpoint-like service.

DIRECTV mentions this because it appears that the Commission is moving in a direction that has the point exactly backwards. The DBS industry, after billions of dollars' worth of investment, has delivered on its promise of developing a formidable competitor to incumbent cable television operations. Diversified and its affiliates, by contrast,

- propose a terrestrial point-to-multipoint technology that has never been shown to be able to co-exist with DBS service even on a secondary basis;
- propose a technology that adds no new capability or value to DBS services already offered at 12 GHz; and
- propose a technology that is easily accommodated in frequencies that have been expressly set aside for Northpoint-like terrestrial services, *e.g.*, LMDS or MDS.

To effectively shift the burden to the DBS industry to prove why such a technology should *not* be permitted to wreak havoc at 12 GHz is inappropriate.

Moreover, it is nonsense to suggest, as Diversified has, that the threshold definition of "harmful interference" should be tantamount to blowing out a DBS subscriber's picture. Part 5 of

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<sup>23</sup> 47 C.F.R. § 5.85(c).

the Commission's rules defines "harmful interference" to include "radiation or induction that . . . obstructs or repeatedly interrupts a radio service" such as DBS "operating in accordance with" the Commission's Table of Frequency Allocations.<sup>25</sup> Part 2 of the Commission's rules defines the term as interference which "seriously degrades, obstructs or repeatedly interrupts a radiocommunication service" such as DBS operating in accordance with the Commission's rules.<sup>26</sup>

The interference that DIRECTV has documented using Diversified's own suspect test results will result in a DBS subscriber's loss of picture at locations close to Northpoint transmitters. Farther away from the transmitters, it will "seriously degrade" subscribers' DBS service, and will result in longer and more frequent rain outages, or "interruptions," to DBS service. Indeed, this type of harmful interference is precisely of the type that DIRECTV has worked arduously for more than two years to address in the NGSO context. If tolerated – even facilitated – by the Commission, it will "seriously degrade," "obstruct" and "repeatedly interrupt" DBS service, causing "harmful interference." Thus, the Commission's rules support the conclusion that DIRECTV has drawn from the Northpoint data.

By harming the DBS industry's reliance on quality of service as a differentiating factor in the MVPD marketplace, such interference could seriously harm the DBS industry's budding success. Indeed, for this reason, the Commission has established and followed for two decades the wise policy of allowing DBS to develop in an environment where terrestrial interference

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<sup>24</sup> See 47 C.F.R. § 2.104(d)(i), (ii).

<sup>25</sup> 47 C.F.R. § 5.5.

<sup>26</sup> 47 C.F.R. § 2.1.

sources were cleared *out* of the 12 GHz band.<sup>27</sup> The Commission must understand that re-introducing significant terrestrial interference sources into the 12 GHz band could be the bad policy judgment that truly snatches defeat from the jaws of victory in terms of fostering viable cable competition.

While Diversified has made enormous progress positioning itself politically to advance its service proposal, the bottom line is that artful lobbying is not a substitute for sound engineering. The Commission should not suggest otherwise, including in actions taken with respect to seemingly innocuous experimental authorizations or STAs.

### **III. CONCLUSION**

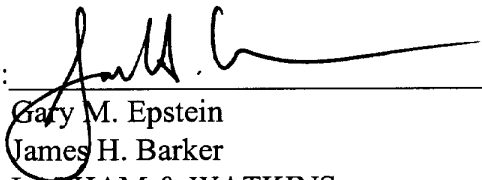
DIRECTV respectfully requests that the Diversified STA be cancelled. In the alternative, modifications to Diversified's STA must be effected immediately, and any testing be suspended until all conditions proposed are in place. As the nation's most promising multichannel video programming distributor competitor to entrenched cable operators, DBS service to subscribers should not be jeopardized by secondary experimental operations in the downlink band that is critical to DBS's operations such as those of DIRECTV.

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<sup>27</sup> See, e.g., Public Notice, Initiation of Direct Broadcast Satellite Service -- Effect on 12 GHz Terrestrial Point-to-Point Licensees in the Private Operational Fixed Service, 10 FCC Rcd 1211 (1994) (explicitly reminding remaining 12 GHz terrestrial licensees of their secondary status, and stating that "[i]n view of the imminent arrival of DBS service, terrestrial 12 GHz licensees should again consider relocating their operations to other available frequency bands or alternative facilities").

Respectfully submitted,

DIRECTV, Inc.

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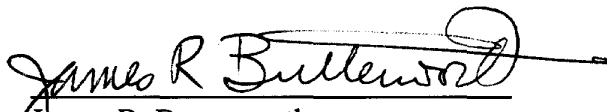
Dated: June 25, 1999

## DECLARATION OF JAMES R. BUTTERWORTH

I, James R. Butterworth, hereby declare as follows:

1. I am Vice President, Space & Communications, for DIRECTV, Inc. I am an engineer by training and am familiar with the technical and interference characteristics of DIRECTV's Direct Broadcast Satellite system, the technical requirements of the Commission's rules, and the interference and technical issues referenced in the foregoing filing.

2. I have reviewed the foregoing filing, and the information found therein is true and accurate to the best of my knowledge, information and belief.

  
James R. Butterworth  
Vice President, Space & Communications  
DIRECTV, Inc.

June 24, 1999